

## SYLLABUS (MODULE-ERASMUS+)

Course/module (as specified in the approved curriculum for the field of study) <b>Rutynowe i zaawansowane metody oceny jakości nasion</b>		ECTS <b>4</b>	Catalogue numer HORT 1.2
Name in English <b>Seed testing – routine and advanced methods</b>			
Unit(-s) providing the course/module (Institute/Department) <b>Department of Phytopathology, Seed Science and Technology</b>			
Head of course/module <b>dr hab. Hanna Dorna</b>			
Field of study <b>Horticulture</b>	Level <b>II – Master studies</b>	Profile <b>General academic studies</b>	Semester <b>winter</b>
Specialisation <b>Plant Breeding, Seed Science and Technology</b>	MSc Specialisation		
<b>TYPE OF CLASSES/LECTURES AND THE NUMBER OF HOURS</b> (organised classes/lectures and self-study)			
Type of studies: full-time		Type of studies: extramural	
- lectures	15	-	
- practicals	35	-	
- consultation	7	-	
- examination	3	-	
- self-study	40	-	
Total number of hours:		100	Total number of hours:
<b>OBJECTIVE OF COURSE/MODULE</b>			
<ul style="list-style-type: none"> <li>- to understand the importance of seed quality for seed industry;</li> <li>- to learn methods of seed quality parameters' determination</li> </ul>			
<b>TEACHING METHODS</b>			
<ul style="list-style-type: none"> <li>- lectures</li> <li>- laboratory classes</li> </ul>			
<b>LEARNING OUTCOMES</b>		Reference to field outcomes	Reference to area outcomes
knowledge	<ol style="list-style-type: none"> <li>1. A student understands the importance of seed quality for seed industry.</li> <li>2. He has a knowledge of seed morphology and anatomy and methods of seed quality determination.</li> </ol>	O2A_W01 O2A_W05	R2A_W01 R2A_W04 R2A_W05 R2A_W06
skills	<ol style="list-style-type: none"> <li>3. A student identifies seeds of basic vegetable and ornamental species.</li> <li>4. He is able to evaluate basic seed quality parameters and interpret the obtained results.</li> </ol>	O2A_U03 O2A_U10	R2A_U04 R2A_U10
Social competences	<ol style="list-style-type: none"> <li>5. A student is prepared for the work in organisations and institutions involved in seed industry.</li> <li>6. He is aware of his professional responsibility for the production of high quality seeds.</li> </ol>	O2A_K05 O2A_K07	R2A_K05

<b>Methods to verify learning outcomes</b> Exam, tests Evaluation of seed identification Evaluation of laboratory classes Exam, tests, evaluation of laboratory classes, discussion	Outcome Reference Numbers 1, 2 3 4 5,6
<b>TEACHING CONTENT</b>	
<p><b>Lectures:</b> Introduction to seed formation, development and chemical composition. Seed morphology and anatomy. Introduction to seed laboratory testing. Seed sampling. Purity analysis. Determination of moisture content. Germination test. Biochemical tests of seed viability evaluation. Methods of seed vigour evaluation.</p>	
<p><b>Practicals:</b> Seed morphology and anatomy of selected vegetable and ornamental species. Seed purity analysis, determination of seed moisture content and evaluation of seed germination of selected horticultural species. Evaluation of seed viability with the topographical tetrazolium test. Evaluation of pea seed vigour – conductivity test. Visit to ISTA authorized member station in Poznań.</p>	
<b>Forms and criteria for passing of course/module</b>  Examination Practicals	Percentage of final mark 70% 30%
<b>LIST OF LITERATURE</b>	
<p>ISTA, 2012. International Rules for Seed Testing. The International Seed Testing Association, Bassersdorf, Switzerland.</p> <p>ISTA, 2008 including Supplement 2010. ISTA Handbook on flower seed testing. The International Seed Testing Association, Bassersdorf, Switzerland.</p> <p>Don R., 2003. ISTA Handbook on Seedling Evaluation. The International Seed Testing Association, Bassersdorf, Switzerland</p> <p>Leist N., Krämer S., Jonitz A., 2003. ISTA Working Sheets on Tetrazolium Testing, vol. 1. Agricultural, Vegetable and Horticultural Species. The International Seed Testing Association, Bassersdorf, Switzerland</p> <p>Leist N., Krämer S., Jonitz A., 2003. ISTA Working Sheets on Tetrazolium Testing, vol. 2. Tree &amp; Shrub Species. The International Seed Testing Association, Bassersdorf, Switzerland</p> <p>Hampton J.G., TeKrony D.M. (red.), 1995. Handbook of Vigour Test Methods. The International Seed Testing Association, Zurich, Switzerland</p>	